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ABSTRACT

CHOICES, the Computerized Heuristic Occupational Information and Career Exploration Systems, was implemented in eight secondary schools in North York, Ontario. This evaluation focused on effectiveness of CHOICES in the career counseling process and in increasing students' career awareness, self-awareness, decision-making skills, and motivation. The first year of the two-year evaluation involved descriptive data collection and questionnaire development. Group interviews were conducted with students, teachers, counselors, and library staff. Questionnaires were completed by 114 of 220 participating students. Results indicated that students generally learned about CHOICES from a guidance counselor. They also received an orientation about CHOICES and completed a vocational profile before using the computer. Counselors discussed results with the students. Students made the most use of the programs "explore" option, which blends the individual's characteristics and suggests compatible occupations. Students were overwhelmingly positive. The major disadvantages reported by counselors were the amount of time required and operating problems. CHOICES compared favorably with other interest and aptitude tests for the third of the total respondents who were familiar with other measures. Both students and counselors recommended that CHOICES remain available. The questionnaire is appended. (GDC)

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RESEARCH REPORT

CHOICES

The Perspective of Participating

Students and Staff

Year I

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
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James Macfarlane

February, 1985

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INTRODUCTION

Background

One of the recommendations derived from the 1983-84 Assessment of Guidance and Counselling Services in North York and subsequently approved by the Board of Education for the City of North York in May 1984 was:

> "that a pilot project be initiated in four secondary schools in order to test the use of microcomputers as a means of providing appropriate educational and career information for students"

In accordance with this recommendation, Guidance and Counselling Services introduced CHOICES, a computer-assisted career exploration program in the Fall of 1984. CHOICES was selected over other career exploration programs because it was felt that it best suited the needs of North York's secondary school students.

Review of Literature

Prior to the emergence in the 1950's of Super's self-concept theory of vocational maturity, choice of vocation was seen as a static, onetime event which occurred about the time students finished high school. Super and others, however, viewed career choice as part of an ongoing process which follows stages parallel to those in developmental psychology and incorporates aspects of self-concept theory:

> (The theory) rests on the assumption that career development conforms with the general principles of human development which is fundamentally evolutionary in nature (Osipow, 1968, p. 118-119).

Remaining the basis for much of today's career thinking, the theory essentially involves awareness of self and the matching of one's view of self with related occupations. Adolescents find themselves at the "crystallization" stage: they become aware of the need to choose a career and of the various factors which must be taken into consideration when making such a decision, they formulate a generalized preference, and they plan for the preferred occupation. Assistance for adolescents in making a career choice at this "crystallization" stage has traditionally been provided by a guidance counsellor.

In recent years, computer-assisted career information systems have been developed which complement the counselling provided by school guidance staff. Typically, the introduction of such systems has been found to:

- increase self-awareness
- increase awareness of the relationship of interests, aptitudes, and values to occupational choice
- expand the number of vocational options being considered
- foster a greater ability to make vocational and educational decisions
- increase occupational knowledge
- increase occupational exploratory behaviour

CHOICES (Computerized Heuristic Occupational Information and Career Exploration Systems) is a career information system developed by Employment and Immigration Canada in 1977. It is used by Employment Centres and School Boards across the country. Numerous evaluation studies have shown it to be effective in encouraging students to take a more active role in planning for their future and in enabling them to make more informed career decisions (Casserly, 1977, 1978; Feron, 1982; Nadeau, 1978; Sloan and Laird, 1982; Telka, 1977, 1978).

Within the context of a school, it is most often used as the basis of a three-phased counselling process designed to develop career maturity and to assist students in making a career choice. In Phase I, prior to using the computer, students complete a comprehensive workbook in order to prepare a vocational profile of themselves. In Phase II the student is introduced to the CHOICES microcomputer and uses one or more of four routes (Explore, Specific, Compare or Related) to access information about various careers. Each route has a specific function.

Explore - the student's characteristics (developed as part of the vocational profile) are blended and a list of compatible occupations is suggested

Specific - a student can ask for detailed information on any of the occupations which CHOICES has stored in its memory

Compare - a student can compare detailed information on occupations

Related - a student can find occupations with characteristics similar to one he/she is already interested in

In Phase III students review the results of Phases I and II with their counsellors and consider alternatives for follow-up action which may include further research into occupations, course selection, post-secondary education and vocational planning.

Purpose of Study

Guidance and Counselling Services requested the assistance of Educational Research and Evaluation Services in assessing the impact of the introduction of CHOICES as an adjunct to the career counselling process. Two questions formed the basis of the study:

1. Do counsellors/teachers perceive CHOICES to be an effective tool in the career counselling process?

2. Is the career counselling process involving CHOICES effective in helping to achieve the following objectives (as established by Career Centre and Research staff):

   a) increase career awareness - make students more aware of the need to plan for a career and of the variety of occupations available

   b) increase self-awareness - encourage students to examine their needs, abilities and interests and to match them to occupational possibilities

c) develop decision-making skills - make students more aware of the criteria which must be considered when choosing a career and teach them how to prioritize their needs and interests and how to negotiate the best possible match between their personal needs and the characteristics of occupations

d) develop motivation - motivate students to plan for their career and to seek further information regarding occupational opportunities.

METHODOLOGY

It was decided to conduct the study over a two-year period. The first year was devoted to descriptive data collection and the refinement of measurement instruments, while the second year will involve a more extensive analysis of the effects of the implementation of CHOICES. This report presents data collected during the first year only.

Data collection procedures were developed by Educational Research and Evaluation Services in co-operation with staff members from the Vocational Career Centre. Data were gathered by means of questionnaires and/or interviews from the following groups:

- all students who had participated in the CHOICES counselling program in the eight secondary schools in which implementation took place (Downsview S.S., E.S. Etienne Brûlé, Georges Vanier S.S., Nelson A. Boylen S.S., Northview Heights S.S., Sir Sanford Fleming S.S., Victoria Park S.S., Westview Centennial S.S.).

- all counsellors/teachers having used CHOICES as part of the career counselling process.

Development of Questionnaires/Interview Schedules

In order to familiarize themselves with CHOICES and the process typically followed by students, Research staff visited the Vocational Career Centre twice during the Summer of 1984. During these visits they participated in a workshop for teachers outlining CHOICES and how it could be used, worked through the CHOICES program themselves, and interviewed the Career Centre staff who had been involved with CHOICES. The hands-on experience and valuable input from V.C.C. staff formed the basis for the development of the questionnaires and interview schedules.

Impressions regarding the effectiveness of CHOICES as a career-counselling tool were elicited from counsellors/teachers and students who participated in the program by means of questions directly related to their usage of CHOICES. During their interviews, counsellors/teachers were asked to discuss the ways in which CHOICES had been implemented in their schools, their impressions of the process and its advantages/disadvantages, and suggestions for change. Students were asked to complete a questionnaire dealing with the pre-CHOICES counselling/preparation, their use of the computer, follow-up activities and their perceptions of the usefulness of CHOICES as a career counselling tool. Copies of the interview schedule and student questionnaire may be found in Appendices A and B.

Although it was felt that these instruments would provide a valuable insight into staff and student perceptions regarding CHOICES, it was also felt that a more objective measurement of its effectiveness would be needed as well. Such a measurement would permit an examination of the actual changes which took place in the student's ability to make a well-informed career decision. A survey of the available literature failed to reveal any appropriate instruments, however, and thus an inventory is being developed by Research staff. The inventory (entitled Career Planning Survey) will be ready for use during the second year of the evaluation study and will be administered as both a pre- and a post-test to students participating in the CHOICES counselling process as well as a control group.

Data Collection Procedures

Guidance counsellors in seven of the schools were given copies of the CHOICES questionnaire to distribute to students during December, 1984, and January, 1985. By the middle of January, counsellors reported that approximately 220 students had participated in the CHOICES counselling process; responses were received from 114. Of those who responded, just over half were enrolled in grade 12, while one-quarter were in grade 13 and one-fifth in grade 11. Sixty-eight percent were in advanced-level courses as opposed to 32% in general-level courses.

In the remaining school, Etienne Brûlé, a group interview was conducted in French with those students who had used CHOICES.

Group interviews were also conducted with all counsellors/teachers who had been involved with CHOICES in each of the schools. A total of 17 guidance counsellors were interviewed, as well as two library staff.

RESULTS

The responses made by students and guidance counsellors are reported together and presented in the following sections:

- Implementation of CHOICES
- Using the Computer
- Advantages of CHOICES
- Disadvantages of CHOICES
- Comparison of CHOICES with Other Interest and Aptitude Inventories
- General Impressions
- Suggestions for Change

The student questionnaires were originally grouped and tallied according to level and grade. Because of the small number of questionnaires in each group and the relative similarity of responses, however, the results were combined for presentation in this report.

Implementation of CHOICES

Both students and guidance counsellors were asked to describe the ways in which CHOICES had been implemented in their schools. Information was elicited regarding the various uses of CHOICES, the means by which students were made aware of its existence, the pre- and post-interaction counselling sessions, and the training provided for the guidance counsellors.

Two-thirds of the students indicated that they were made aware of CHOICES by a guidance counsellor, while 14% mentioned a teacher, 11% a friend, and 7% a career development course. The guidance counsellors responded in greater detail and their answers are outlined in the table below. It is interesting to note the wide variety of ways in which CHOICES is being used in the schools and the means by which students are being made aware of its existence.

	# of Schools
. students hear about CHOICES from friends, other students	6
. CHOICES is used as a compulsory unit in many courses (ie. English, Computer Science, P.H.E., Career Development)	5
. school staff has been made aware of the existence of CHOICES (usually at staff meetings) in order that they may refer students to it as well as use it in their classrooms	5
. students are referred on an individual basis by a guidance counsellor	4
. CHOICES was written up in school newspaper, calendar, parent newsletter/announced over PA system/advertised on bulletin board	4
. guidance counsellors/volunteers visit classes to speak about CHOICES and encourage students to use it	3
. all job descriptions have been printed out and are on file in the library/guidance office	3
. CHOICES was on display during Career Week/Open House	2
. used by teachers in the classroom (i.e. a Family Studies teacher had students examine their interests and temperaments and then compare them with those recommended for Child Care occupations)	1
. CHOICES was introduced at a parents' meeting	1
. a list of all course-related careers was made up for subject teachers	1

Students are usually introduced to CHOICES by means of an orientation session which is used to explain what CHOICES is and how to complete the guide. Once the students have completed the guide they meet with a guidance counsellor for a one-to-one counselling session. A second counselling session is held after the student has used the computer in order to discuss the results. Students were asked to discuss their participation in such activities and an evaluation of their usefulness can be found in the section dealing with the advantages of CHOICES.

Half the students indicated that they had participated in a group orientation session while 40% indicated that they had been dealt with on an individual basis. Of the remaining students, 6% reported that they had not been involved in any orientation session and 4% reported that they had been involved in both a

group and an individual session. The overwhelming majority indicated that the orientation had been conducted by a guidance counsellor and only 28% stated that they had seen the video explaining the CHOICES process. The time spent in either group or individual orientation sessions is outlined below.

Time Spent in Orientation Session (minutes)	Students %
1-30	48
31-60	13
61-90	9
91-120	4
More than 120	1
No response	25

nety percent of the students indicated that the guide had been somewhat to y helpful in preparing them for the use of the computer and 75% reported ving participated in a one-to-one counselling session with a counsellor after pleting the guide but before using the computer. The time spent in these nselling sessions was as follows:

Time Spent in Counselling Session (minutes)	Students %
1-30	86
31-60	11
61-90	2
91-120	1
More than 120	-

ty percent of the students reported having spent time with a counsellor on a -to-one basis discussing the results of their interaction with CHOICES. In lity, this figure was probably higher as a number of students completed the stionnaire shortly after using CHOICES but before they had had a chance to e an appointment with the counsellor. Of those who did see a counsellor, ee-quarters reported making one visit, while 18% made two or more. The unt of time spent discussing the results of the interaction with CHOICES was follows:

Time Spent (minutes)	Students %
1-30	84
31-60	7
61-90	-
91-120	3
More than 120	-
No response	6

Eighty-four percent of the students felt that the amount of time spent discussing the results was "about right", while 12% felt it was "too short".

Eighteen percent of the students reported having spent time discussing the results of their interaction with CHOICES with a counsellor in a group.

The guidance counsellors were asked to comment on the training they received to prepare them for assisting students with CHOICES. The majority indicated that they found it to be "excellent" and "very worthwhile". They did express dissatisfaction with certain aspects of the program, however, and these comments, as well as suggestions for change, are recorded below.

	# of Schools
. the final examination was inappropriate	3
. the session was perhaps longer than it needed to be; could have been condensed	3
. more hands-on computer time should be given	3
. counsellors should perhaps have a chance to familiarize themselves with CHOICES before taking the course	1

Guidance staff in one school also suggested that a workshop be given to help them counsel students regarding conflicts between temperaments and interests.

At one school half a Professional Development day was spent training student monitors and familiarizing other counsellors and the guidance secretary with CHOICES.

Using the Computer

Students were asked a number of questions regarding their actual use of the computer and, more specifically, the routes they used.

The route used most frequently was "Explore" (98% of the students), followed by "Specific" (77%), "Compare" (61%) and "Related" (51%). "Explore" was also the route that students spent the most time using. Eighty-two percent of the students indicated spending most of their time with it as opposed to 5% for "Specific", 5% for "Compare", and 3% for "Related". The amount of time that students spent at the computer altogether is reported in the table below.

Amount of Time Spent at Computer (minutes)	Students %
1-30	2
31-60	29
61-90	44
91-120	15
More than 120	4
No response	6

Eighty-nine percent of the students indicated that someone was available to assist them while they were using the computer, while 3% responded "no" and 6% "sometimes".

Advantages of CHOICES

Both guidance counsellors and students were asked to discuss the advantages of using CHOICES as part of the career counselling process. Their responses can be classified under two main headings: Advantages for students and advantages for guidance staff.

I. Advantages for Students

Guidance counsellors and students cited a large number of benefits for students as a result of the introduction of CHOICES. In general, these benefits are related to increased self-awareness, improved decision-making skills, more extensive information about occupations and increased motivation to plan for a career.

Students were asked to discuss whether or not they experienced any difficulties in dealing with the computer or in understanding the CHOICES program. From the responses received, it would appear that most students were in fact able to use CHOICES with relative ease. Only 16% reported having found the language used in the guide somewhat difficult to understand and the overwhelming majority agreed that the program itself was not difficult to understand. Over 90% indicated having felt "somewhat" to "very comfortable" dealing with the computer, with no significant differences between male and female students. Eighty-four percent reported having understood the negotiating process involved in CHOICES and of those students, almost all felt that they had been "somewhat" to "very successful" with it. While most students indicated that they felt just as comfortable talking to a counsellor as they did to CHOICES, 15% indicated that they appreciated the privacy which CHOICES afforded and took advantage of it to tell it things that they would have been uncomfortable saying to a counsellor.

An important component of the CHOICES counselling process is the completion of the guide. By working through the various topics, it is hoped that the student will gain a better understanding of his/her interests, abilities and career goals and that he/she will become more aware of how to make career decisions. The students were asked to discuss the extent to which the guide helped meet these objectives and from the responses received, it would appear that they found it quite helpful. Ninety-two percent indicated that the guide was "somewhat" to "very helpful" in clarifying their interests, abilities and career goals and 95% reported that it was "somewhat" to "very helpful" in increasing their awareness of how to make career decisions.

Another advantage of using CHOICES is that it encourages students to begin planning for their career and to seek further information regarding occupational opportunities. When asked what they did with their computer printout from CHOICES (i.e. the list of careers deemed compatible with the student's interests and abilities), the students responded as follows:

	Students %
. studied it by myself	75
. showed it to a friend	55
. showed it to a counsellor	53
. showed it to a parent/guardian	49
. showed it to a teacher	13
. no response	3

In addition, seventy-nine percent indicated that using CHOICES had stimulated discussion with parents, friends and/or others regarding occupations.

While discussing the results of the interaction with CHOICES, guidance counsellors often identified a number of possible follow-up activities for students to pursue. Students reported that the following activities had been suggested:

	Students %
. further testing to clarify interests and aptitudes	51
. examining educational possibilities	51
. using CHOICES again	47
. more in-depth research on occupations	40
. related work experiences (volunteer, co-operative, summer)	29
. discussions with people working in different occupations	24
. investigation of training programs and apprenticeships	21
. visits to various work sites	12

As the majority of students had finished the CHOICES program in the three weeks leading up to the administration of the questionnaire, not all had had a chance to follow up on the suggestions. In fact, the most commonly cited reason for not having followed them up was that there had not been enough time. Forty-seven percent of the students did indicate, however, that they had followed up on at least one of the suggestions.

The majority of students found the discussion with the guidance counsellor to be helpful: 59% indicated that it was valuable, 34% somewhat valuable, and only 3% not at all valuable.

In addition to the suggestions for follow-up activities which they received, the students cited a number of other reasons for their satisfaction with the discussion:

	Students %
. gave me an idea as to what I might possibly be interested in going into/helped me make some decisions about the future/made me realize that I have a number of career alternatives	10
. helped me understand the printout	8
. counsellor provided further information regarding educational possibilities and referred me to other sources of information	4
. counsellor helped me understand the relationship between my interests and abilities, and certain occupations	3
. counsellor knew my abilities and limitations and so could guide me/got another opinion from someone who knows me	3

Students were also asked to evaluate a number of other features of the CHOICES program: the value of the various routes, CHOICES' ability to match interests and aptitudes with appropriate occupations, and the usefulness of the information provided.

Students were asked to select the route which they found the most valuable and to explain why. Their responses are indicated below.

	Students %
. **Explore**	49
- came up with a number of careers which corresponded to my interests and aptitudes - came up with a wide variety of occupations I'd never heard of/opened a lot of doors - helpful in narrowing down my choices - helped me to get to know more about myself and what types of things hold me back from getting the job I want	
. **Specific**	19
- provided a detailed look at various occupations - it gave me all the information I needed to know about the occupation I'm interested in	
. **Compare**	18
- it allowed you to see the difference between two occupations "I was actually able to see just how different editing and reporting were in the field of journalism." - it gave you information about two different jobs at the same time	
. **Related**	5
. **No response**	8

In order to gauge whether or not CHOICES was helpful in relating students' abilities and interests to occupational possibilities, students were asked to evaluate the appropriateness of the occupations it suggested. Seventy-two percent of the students indicated that they had had a clear idea of the occupations they were interested in before using CHOICES, but of those, 26% reported that CHOICES had presented new alternatives and 57% that it had both presented alternatives and confirmed already existing ideas. Thirteen percent stated that CHOICES had confirmed their ideas. Students were also asked to rate CHOICES' usefulness in helping them to find out which occupations fit their interests/abilities. In general, their responses were positive:

	Students %
. useful/very useful	26
. showed me what a wide variety of occupations my interests and aptitudes allow me to pursue/came up with a list of jobs that closely corresponded to my interests and aptitudes/came up with occupations I'd never thought of before	14

	Students %
. somewhat useful	10
. not at all useful	10
. confirmed most of my ideas	2
. very helpful - eliminated all choices that had been thought of but weren't identified with my interests/abilities	1

Seventy-three percent of students indicated that CHOICES had provided them with information they didn't already have. When asked to specify what kind of information, they responded as follows:

	Students %
. provided information regarding income/training and educational requirements/working conditions/hours/aptitudes/temperaments/future demand	25
. provided detailed information on specific careers	20
. suggested a wide variety of occupations which corresponded to my interests and aptitudes/presented me with a number of career alternatives/found careers related to those I was already interested in/exposed me to occupations I didn't even know existed	19
. "CHOICES has access to information that is not readily available in the guidance office"	1
. "provided me with information I didn't really know I needed"	1
. "I didn't realize what type of person I had to be to fit my career choice"	1
. "how a job affects your personal life"	1

Guidance counsellors were also asked to discuss the advantages which CHOICES has to offer to students. While in general their comments supported those made by students, they were also able to consider the effects of CHOICES as part of the overall career counselling process. Their responses were as follows:

	# of Schools
. CHOICES increases students' self-awareness, forces them to examine their needs, interests and abilities	5
. CHOICES exposes students to a wide variety of different occupations/provides them with a large number of occupational alternatives/encourages them to keep their options open	5
. students enjoy working with CHOICES - it has a wider appeal than books and pamphlets	4
. CHOICES helps students to approach career planning more realistically/helps them to realize that they may have to make compromises	4
. comes up with very appropriate career suggestions for students/best vehicle for relating personal qualities to the work world	3

	# of Schools
• gets students thinking about the future	1
• teaches students how to make a career decision	1
• motivates students to pursue unexciting avenues of career information	1
• provides an opportunity for students to negotiate and actively participate in making choices and decisions - they're not just passively receiving information	1

Counsellors in two schools also pointed out that CHOICES helps to encourage communication between the students and their parents regarding possible future occupations. When the students take their printout home or speak about the counselling process, parents become more aware of their children's interests, abilities and needs, and become more involved.

I. Advantages for Guidance Staff

Not only does CHOICES offer a number of advantages to students, but it has much to offer to guidance counsellors as well. Both students and counsellors were asked to describe the ways in which CHOICES has been of use to guidance staff. The majority of their responses centred around the value of the CHOICES program in helping students to explore their career alternatives, the opportunity it has given the guidance counsellors to get to know their students better and the higher profile which it has afforded the guidance department. The guidance counsellors also cited their increased motivation to become involved in career planning.

Students were asked to what extent CHOICES had enabled guidance counsellors to provide more extensive career counselling. Forty-four percent indicated that it had enabled them to provide more extensive career counselling "to a great extent", while 36% responded "somewhat" and only 4% "not at all". Sixteen percent indicated that they didn't know. When asked to explain in what way CHOICES enabled guidance counsellors to provide more extensive career counselling, the students responded as follows:

	Students %
CHOICES gives counsellors a better understanding of their students' interests, aptitudes, and goals. This enables them to provide more appropriate counselling	10
CHOICES gives students an opportunity to find out more about occupations and the career decision-making process	9
• CHOICES gives counsellors more up-to-date information on careers	4
• information is very accessible	2
• extra tool to be used by counsellors	1
• "provides a way that enables the student to get involved in a bargaining process concerning interests and careers on a private basis"	1
• "CHOICES made it easier to talk"	1

The students also indicated that in some cases CHOICES had been the determining factor in encouraging them to seek career counselling. While half the students reported that they would have approached Student Services for career counselling even if they hadn't heard about CHOICES, 12% stated that they wouldn't have and 39% responded "maybe". Those students who indicated that they wouldn't have approached Student Services if they hadn't heard about CHOICES were asked to explain why: one-fifth explained that it was because they didn't know that Student Services was involved in career planning.

It would appear as if CHOICES is also able to reach a considerable number of students who have never given much thought to their future occupational choices: 30% of the students who participated in the CHOICES counselling process had never discussed possible future occupational choices with a counsellor/teacher and 23% had never had such a discussion with anyone else.

Guidance counsellors were also asked to discuss the advantages to themselves of using CHOICES as part of their career counselling processes. They responded as follows:

	# of Schools
. CHOICES is a thorough career exploration program that can become the focal point for career counselling	6
. "great public relations for the department": provides something concrete that staff, students and parents can associate with the guidance department - helps tremendously with credibility	3
. CHOICES is interesting, exciting; has given guidance counsellors more incentive to become involved with career planning	3
. helps counsellors get to know the students better, become more involved with them - especially the brighter students (i.e. non-problem); has made guidance more approachable for good students,not just referral	1
. counsellors perhaps have more information than CHOICES but CHOICES is able to tie it all together, gives a better overall picture of a student	1
. promotes the concept of career education	1
. easy to give information on specific jobs right away; immediate feedback as compared to other tests and inventories	1
. saves counsellors having to do reading to keep up to date	1
. more students are now involved in the career counselling process	1

Disadvantages of CHOICES

Although CHOICES has many advantages to offer to students and guidance personnel, there are also a number of disadvantages associated with the program. For the most part these disadvantages are related to the amount of time involved in putting a student through the program, operating problems, and the high level of reading and comprehension skills needed to complete the guide.

In general, students were able to identify very few disadvantages: the majority of their comments were overwhelmingly positive. The few unfavourable remarks

they did make were usually in the form of suggestions for change and as such, have been included in the final section of this report. It was the guidance counsellors who offered the most comments regarding the drawbacks associated with CHOICES. Their remarks are summarized below:

	# of Schools
. CHOICES is extremely time-consuming	6
. high level of reading and comprehension skills are needed to complete the guide - inappropriate for Basic-level students, difficult for General-level	3
. a lot of operating problems	3
. career groups should be broken down into more specific occupations (like C.C.D.O.)	2
. descriptions of occupations could be improved - format very dry	1
. guide is often difficult to complete if students have never examined their interests and aptitudes	1
. information printout for Specific, Compare not very meaningful, i.e. just prints "aptitudes 3, 5, 7" - might as well print all the information	
. program is slow and students often get bored	1

The guidance counsellors were asked to elaborate on their comments regarding the time-consuming nature of CHOICES and to discuss the ways in which the amount of time spent with students could be reduced. Counsellors in half the schools stated that they had not used CHOICES as much as they had hoped to due to both operating problems and lack of sufficient time. In two schools counsellors reported that they had had to sacrifice time in other areas (especially responding to requests for counselling) in order to accommodate CHOICES. In one case they felt that the sacrifice was "definitely worth it", while in the other they "weren't sure yet". Guidance staff in another of the schools reported that "the amount of time put into it [CHOICES] is definitely worth it for the student". Two schools reported that because of CHOICES, there was a greater emphasis on career counselling than before.

In order to reduce the amount of time they need to spend putting students through the CHOICES program, guidance counsellors in five schools have enlisted the help of student monitors or volunteers from the community. These monitors and volunteers are trained either by the guidance counsellors or the Vocational Career Centre and carry out a variety of duties: sitting with students while they're at the computer, assisting them with completing the guide, visiting classes to speak about CHOICES and referring students who they think would benefit from the program. The system appears to be working well: the counsellors report that they have saved a considerable amount of time by using monitors/volunteers ("without them it would have been very difficult") and that they are pleased with the quality of their work. In addition, they feel that both the monitors/volunteers and the students are enjoying the experience.

Conducting group as opposed to individual orientation sessions is another way that guidance counsellors have been able to reduce the amount of time necessary to put a student through the CHOICES program. In schools where the majority of the orientation sessions were being conducted on an individual basis, the guidance personnel indicated that they would soon be moving towards more group work.

The guidance counsellors in one school suggested that the staff allocation for guidance be increased in order to ensure that there was sufficient time for CHOICES as well as other duties. They also felt that time would be used most efficiently if certain counsellors could be specifically devoted to CHOICES.

Comparison of CHOICES with Other Interest and Aptitude Inventories

Both students and guidance personnel were asked to compare CHOICES with other interest and aptitude inventories with which they were familiar. Only 32% of students had ever taken an interest or aptitude test before, but of those, 55% said that the tests they had taken were less helpful than CHOICES. Nineteen percent indicated that they were just as helpful and 23% said even more helpful.

Guidance counsellors also indicated that CHOICES compares favourably with other interest and aptitude tests. Their comments are summarized below.

	# of Schools
. students find CHOICES more interesting, they enjoy working with the computer. The other tests and inventories are pen and paper - students often find them long and frustrating	4
. interest and aptitude tests are given to students before they use CHOICES - this ensures that their input to CHOICES is more accurate	3
. CHOICES provides an opportunity for negotiation, compromise, change	2
. the pre- and post-interaction counselling sessions mean that the students' experience is more thorough. Often with the other tests and inventories the students never went back for counselling. Now there is more contact with the students and counsellors can determine exactly what they're getting out of it.	1
. more potential for providing career alternatives	1
. gives a better over-all summary of the student	1

General Impressons

Up to this point the focus of the report has been on the specific components of the CHOICES counselling process and its advantages/disadvantages for both students and guidance counsellors. The overall impressions of the process were also solicited, however, and the responses are discussed in this section. In general, both guidance counsellors and students reported having been very satisfied with the CHOICES counselling process.

Sixty-two percent of the students indicated that CHOICES was "helpful" to "very helpful", while 25% found it to be "somewhat helpful" and only 14% "not very helpful". Almost all students (96%) would recommend it to other students in their class and if it were always available in their school, they would use it as follows:

	Students %
. more than four times a year	14
. three to four times a year	24
. twice a year	31
. once a year	26
. never	4
. no response	2

Students were also given a chance at the end of the questionnaire to make any additional comments: 29 took the opportunity to do so. Of the comments made, over 80% were favourable to CHOICES. Students repeated their satisfaction with such things as the specific information provided about occupations, the opportunity provided for career exploration and self-evaluation, and the wide range of different occupations to which the student is exposed. A sampling of their comments is found below:

- "CHOICES is a fantastic program that really allows one to analyse oneself and actually is able to translate information into interesting careers one would never have considered otherwise"
- "it puts a confused student in touch with their future"
- "I really enjoyed using CHOICES. I found it told me a lot about the type of person I am even though it was just through career suggestions"
- "I have always had a great interest in what I'm going to do therefore I have always kept up on most of its facts and requirements for careers. Yet I still learned more from CHOICES. Thanks"
- "I would greatly urge the Board of Education to implement CHOICES in as many schools as is practical. I think CHOICES is a tool that would solve a great number of occupational headaches and would steer an individual on the right path in terms of occupational choice".

Comments were also made regarding the most appropriate time for introducing students to CHOICES (to be discussed in the next section) and perceived shortcomings, i.e. one student felt that CHOICES should go into more detail when describing a specific occupation, and another warned about the dangers of attaching too much importance to the final printout:

> "I think that CHOICES is a good system for high school students to use, as long as the computer doesn't end up making the final decision as to what the student should do. Many students are uncertain as to what career they should enter and may be tempted to leave it entirely up to the computer."

The guidance counsellors were asked whether or not they thought that CHOICES should be maintained in their schools. Counsellors in six of the schools were very definite in stating that it should be, while those in the remaining schools responded with a tentative "yes" and a "wait and see". They felt that CHOICES was a very costly educational tool and wanted to have more experience with it before committing themselves to a definite answer.

Suggestions for Change

Throughout the interview and questionnaire, guidance counsellors and students were given the opportunity to make suggestions for changes in the CHOICES counselling process and the way in which it had been implemented in their schools. Because the reactions to CHOICES were generally very positive, however, there were few suggestions for change.

Students were asked if there was anything that could have made their experience with CHOICES more useful. Their responses were as follows:

	Students %
. nothing	39
. using the CHOICES program more often	26
. spending more time when at the computer	25
. knowing more about using the CHOICES program	14
. having more counsellor assistance	12
. using the computer by myself	6
. other - knowing if you're capable of doing the occupation you've selected	3
- a wider range of occupations stored in the program files	1
. no response	2

As has been mentioned, most students completed the CHOICES questionnaire shortly after finishing the counselling process. This meant that they had little opportunity to use CHOICES again and therefore explains the fairly high number of students who indicated that "using the CHOICES program more often" would have made their experience with CHOICES more useful. As it was, 17% of the students used it twice and 6% used it three or more times.

Guidance counsellors made some suggestions for changes in the CHOICES training session they attended (see section entitled "Implementation of CHOICES"). Other concerns and/or suggestions are recorded below.

	# of Schools
. CHOICES should definitely be maintained, but adequate staffing must be provided. Counsellors are not able to make optimal use of CHOICES because they are too busy with other concerns	2
. the guides are expensive - they can really eat into the budget. Counsellors are contemplating charging students for it next year	2
. counsellors have heard that subject teachers in some of the schools are putting students through CHOICES. They are concerned about the quality of the pre- and post-interaction counselling in such cases as the subject teachers often don't have the necessary knowledge and experience	1
. would like to see more staff trained, i.e. one person in every department	1

	# of Schools
• would like a second computer to double the number of students who could use it	1
• principals should be made aware of the amount of time involved in putting students through CHOICES	1
• if CHOICES stays in the schools, the principals should change the job descriptions of some of the counsellors	1
• definitions should be given for some of the terms used in the guide - they can be interpreted in different ways by the students (i.e. following, leading, responsible)	1

Students and guidance staff were also asked to indicate what they felt would be the most appropriate time for introducing students to CHOICES. While 61% of students reported that they had been introduced to CHOICES "at just the right time", 39% felt that it had been "too late". Their suggestions as to the ideal time were as follows:

	Students %
• grade 8	4
• grade 9	11
• grade 10	30
• grade 11	44
• grade 12	9
• grade 13	-
• no response	3

Although the majority of students felt that grades 10 and 11 would be the most appropriate time for introducing students to CHOICES, guidance counsellors were more likely to indicate higher grade levels, i.e. grades 11 and 12. They did state, however, that much depended on the individual student's level of career maturity and motivation.

The majority of responses from both guidance counsellors and students regarding CHOICES were positive. A considerable number of advantages related to its use were identified: for students, increased self-awareness, improved decision-making skills, more extensive information about occupations, and increased motivation to plan for a career; for guidance counsellors, the value of the CHOICES program in helping students to explore their career alternatives, the opportunity it has given them to get to know their students better, the higher profile it has afforded the department, and increased motivation to become involved in career planning. The only disadvantage mentioned was the amount of time it takes to put a student through the counselling process. Ninety-six percent of the students indicated that they would recommend CHOICES to other students in their class and almost all guidance counsellors strongly expressed a desire for it to remain in their schools.

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INTERVIEW SCHEDULE FOR CHOICES EVALUATION

I. Implementation

a) How has CHOICES been implemented in your school? How were students made aware of its existence? What sort of preparation/follow-up do students receive?

b) Was the training you received adequate? Were there any problems with respect to installation, utilization? How often were you in contact with the V.C.C.?

c) Has CHOICES been used by anyone other than students (e.g. subject teachers, counsellors)?

II. Evaluation

a) What advantages does it offer to students - personally?
- educationally?
- vocationally?

b) What advantages does it offer guidance counsellors?

c) What are the disadvantages associated with CHOICES?

d) Do you have to sacrifice time in other areas to accommodate CHOICES? If yes, is it worth it? Is there a greater emphasis on careers than before?

e) Has CHOICES brought some students into Student Services for career counselling who might otherwise not have come? Has CHOICES helped make students/teachers more aware of Student Services and what is available?

f) How does CHOICES compare with interest and aptitude tests you have used? With S.G.I.S.?

g) When should CHOICES be first introduced to students?

h) What has been the feedback from - students?
- parents?
- teachers?
- guidance staff?
- school administration?
- others (e.g. employers, post-secondary institutions)?

i) Should CHOICES be maintained? Do you have any suggestions for changes in the way it has been implemented, is being used?

CHOICES QUESTIONNAIRE

Sex: Male ☐ Female ☐

Grade: 10 ☐ 11 ☐ 12 ☐ 13 ☐

Level of Study: General ☐ Advanced ☐

How long has it been since you discussed your CHOICES printout with a counsellor/teacher?

Less than a week ☐ 1-2 weeks ☐ 3-4 weeks ☐ More than 4 weeks ☐

PRE-CHOICES COUNSELLING/PREPARATION

1. How did you find out about CHOICES?

   - notice on board ☐
   - guidance counsellor ☐
   - career development course ☐
   - teacher ☐
   - friend ☐
   - other (please specify) _____

2. How many times have you used CHOICES? (Please check one)

   1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ More than 5 ☐

3. Before using CHOICES, what kind of preparation did you receive?

   - group orientation session to explain what CHOICES is and how to complete the guide ☐
   - individual orientation session ☐
   - none ☐

   If you did participate in a group or individual orientation session, how long did it take?

   _____ minutes

   By whom was the orientation conducted?

   - guidance counsellor ☐
   - co-op teacher ☐
   - student ☐
   - other (please specify) _____

   Did you see the video explaining the CHOICES process?

   Yes ☐ No ☐

4. Did you find the language used in the guide difficult to understand?

Not at all difficult		Somewhat difficult		Very difficult
☐	☐	☐	☐	☐

5. To what extent did completing the guide help you to clarify your interests, abilities and career goals?

To a great extent		Somewhat		Not at all
☐	☐	☐	☐	☐

6. To what extent did completing the guide help you to become more aware of how to make career decisions?

To a great extent		Somewhat		Not at all
☐	☐	☐	☐	☐

7. To what extent did completing the guide help to prepare you for the use of the computer?

To a great extent		Somewhat		Not at all
☐	☐	☐	☐	☐

8. After completing the guide and before using the computer did you participate in a one-to-one counselling session with a counsellor/teacher?

Yes ☐ No ☐

If yes, how much time was spent on the session? _____ minutes

USING THE COMPUTER

9. Was someone available to assist you while you were using the computer?

Yes ☐ No ☐ Sometimes ☐

10. How difficult was it to understand the CHOICES program the first time you used it?

Not at all difficult		Somewhat difficult		Very difficult
☐	☐	☐	☐	☐

11. Which routes did you use? In what order?

	Route	Order
Explore	☐	_____
Specific	☐	_____
Compare	☐	_____
Related	☐	_____

12. Which route did you spend most time using? (Check only one)

Explore	☐
Specific	☐
Compare	☐
Related	☐

How much time? _____ minutes

13. Which route did you find most valuable? (Check only one)

Explore	☐
Specific	☐
Compare	☐
Related	☐

Why? _____

_____

14. Did you use the Education and Training file?

Yes ☐ No ☐

If yes, how many occupations did you investigate? _____

How helpful did you find the Education and Training file?

Very helpful		Somewhat helpful		Not at all helpful
☐	☐	☐	☐	☐

Please explain: _____

_____

_____

_____

_____

15. How much time did you spend at the computer altogether?

_____ minutes

16. How comfortable did you feel dealing with the computer?

Not at all comfortable		Somewhat comfortable		Very comfortable
☐	☐	☐	☐	☐

If you didn't feel comfortable, why not? _____

_____

_____

_____

FOLLOW-UP ACTIVITIES

17. What did you do with your computer printout from CHOICES?

- showed it to a friend ☐
- showed it to a parent/guardian ☐
- showed it to a counsellor ☐
- showed it to a teacher ☐
- threw it away ☐
- studied it by myself ☐

18. Did using CHOICES stimulate discussion with parents, friends and/or others regarding occupations?

Yes ☐ No ☐

19. Did you spend time with a counsellor/teacher on a one-to-one basis discussing your printout?

Yes ☐ No ☐

How many times? _____

Approximately how long did you spend discussing the printout with the counsellor/teacher each time?

_____ minutes

The amount of time was:
- about right ☐
- too long ☐
- too short ☐

How valuable was the discussion?

Very valuable ☐ ☐ Somewhat valuable ☐ ☐ Not at all valuable ☐

Please explain: _____

_____

20. Did you spend time discussing your profile with a counsellor/teacher in a group?

Yes ☐ No ☐

21. As a result of your discussion with the counsellor/teacher did you identify any of the below as possible follow-up activities? (Check all that apply)

- further testing to clarify interests and aptitudes ☐
- investigation of training programs and apprenticeships ☐
- related work experiences (volunteer, co-operative, summer) ☐
- discussions with people working in different occupations ☐
- visits to various work sites ☐
- examining educational possibilities ☐
- more in-depth research on occupations ☐
- using CHOICES again ☐
- other _____ (please specify)

22. Have you followed-up on any of the suggestions?

Yes ☐ No ☐

If yes, which ones? If no, why not?

_____

_____

_____

_____

CHOICES AS A CAREER-COUNSELLING TOOL

23. Had you discussed possible future occupational choices with a counsellor/ teacher prior to using CHOICES? With anyone else?

	Yes	No
- counsellor/teacher	☐	☐
- others	☐	☐

24. Have you ever taken any interest or aptitude tests?

Yes ☐ No ☐

If yes, how helpful were they compared to CHOICES?

More helpful		Same		Less helpful
☐	☐	☐	☐	☐

25. Did you have a clear idea of the occupations you were interested in before using CHOICES?

Yes ☐ No ☐

If yes, did CHOICES confirm your ideas, or did it present new alternatives?

- confirmed ideas ☐
- presented alternatives ☐
- both ☐

26. How helpful was CHOICES in showing you the relationship between interests/ abilities and career decisions?

_____

_____

27. How useful was CHOICES in helping you to find out which occupations might fit your interests/abilities?

_____

_____

28. Did CHOICES provide you with information you didn't already have?

Yes ☐ No ☐

If yes, please explain: _____

_____

_____

29. In general, how helpful was CHOICES?

Not at all helpful		Somewhat helpful		Very helpful
☐	☐	☐	☐	☐

30. Is there anything that could have made your experience with CHOICES more useful?

- no ☐
- knowing more about using the CHOICES program ☐
- using the CHOICES program more often ☐
- spending more time when at the computer ☐
- using the computer by myself ☐
- having more counsellor assistance ☐
- other: _____

_____

31. Did you understand the negotiating process involved in CHOICES?

Yes ☐ No ☐ Don't know ☐

32. How successful were you in negotiating with the program?

Very successful		Somewhat successful		Not at all successful
☐	☐	☐	☐	☐

If you weren't successful, why not? _____

_____

CHOICES AND CAREER-COUNSELLING SERVICES

33. Are there sufficient resource materials in your school to answer your questions regarding specific occupational areas?

Yes ☐ No ☐ Don't know ☐

If no, please explain: _____

_____

34. To what extent has CHOICES enabled guidance counsellors to provide more extensive career counselling?

To a great extent	Somewhat	Not at all	Don't know
☐	☐	☐	☐

Comments: _____

_____

_____

35. Would you have approached Student Services for career counselling if you hadn't heard about CHOICES?

Yes ☐ No ☐ Maybe ☐

If no, why not? _____

_____

36. Were there some things that you could tell CHOICES that you would have been uncomfortable saying to a counsellor?

Yes ☐ No ☐

37. Would you recommend CHOICES to other students in your class?

Yes ☐ No ☐

If no, why not? _____

_____

38. Do you feel you were introduced to CHOICES:

- too early ☐
- too late ☐
- at just the right time ☐

39. At what grade should students first be introduced to CHOICES? _____

40. If the CHOICES program were always available in your school, how often would you use it?

- never ☐
- once a year ☐
- twice a year ☐
- three to four times a year ☐
- more than four times a year ☐

Any additional comments? _____

_____

_____

_____

_____

THANK YOU FOR YOUR CO-OPERATION

E.R. & E.S.
Oct./84